FilterPandasDataframeWithMultipleConditions

September 8, 2025

```python
[3]: import pandas as pd
     import numpy as np
```

```python
[1]: # import module
     import pandas as pd

     # assign data
     dataFrame = pd.DataFrame({'Name': [' RACHEL  ', ' MONICA  ', ' PHOEBE  ',
                                        '  ROSS    ', 'CHANDLER', ' JOEY     '],

                               'Age': [30, 35, 37, 33, 34, 30],

                               'Salary': [100000, 93000, 88000, 120000, 94000,
                        ↪95000],

                               'JOB': ['DESIGNER', 'CHEF', 'MASUS', 'PALENTOLOGY',
                                       'IT', 'ARTIST']})

     # display dataframe
     display(dataFrame)
```

```
          Name  Age  Salary          JOB
0      RACHEL    30  100000     DESIGNER
1      MONICA    35   93000         CHEF
2      PHOEBE    37   88000        MASUS
3      ROSS      33  120000  PALENTOLOGY
4      CHANDLER  34   94000           IT
5      JOEY      30   95000       ARTIST
```

```python
[2]: # filter dataframe
     display(dataFrame.loc[(dataFrame['Salary']>=100000) & (dataFrame['Age']< 40) &
      ↪(dataFrame['JOB'].str.startswith('D')),
                           ['Name','JOB']])
```

```
          Name        JOB
0      RACHEL    DESIGNER
```

```
[5]: # filter dataframe
     filtered_values = np.where((dataFrame['Salary']>=100000) & (dataFrame['Age']<↵
       ↪40) & (dataFrame['JOB'].str.startswith('D')))
     print(filtered_values)
     display(dataFrame.loc[filtered_values])
```

```
(array([0]),)
```

```
       Name  Age  Salary        JOB
0    RACHEL   30  100000  DESIGNER
```

```
[6]: # filter dataframe
     display(dataFrame.query('Salary  <= 100000 & Age < 40 & JOB.str.startswith("C").
       ↪values'))
```

```
       Name  Age  Salary   JOB
1    MONICA   35   93000  CHEF
```

```
[7]: # filter dataframe
     display(dataFrame[(dataFrame['Salary']>=100000) & (dataFrame['Age']<40) &↵
       ↪dataFrame['JOB'].str.startswith('P')][['Name','Age','Salary']])
```

```
     Name  Age  Salary
3    ROSS   33  120000
```

```
[8]: # filter dataframe
     display(dataFrame[dataFrame.eval("Salary <=100000 & (Age <40) & JOB.str.
       ↪startswith('A').values")])
```

```
     Name  Age  Salary      JOB
5    JOEY   30   95000  ARTIST
```

```
[9]: !jupyter nbconvert --to pdf "FilterPandasDataframeWithMultipleConditions.ipynb"↵
       ↪--output "C:/Users/ASUS/Downloads/
       ↪FilterPandasDataframeWithMultipleConditions.pdf"
```

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[NbConvertApp] Converting notebook
FilterPandasDataframeWithMultipleConditions.ipynb to pdf
[NbConvertApp] Writing 26861 bytes to notebook.tex
[NbConvertApp] Building PDF
[NbConvertApp] Running xelatex 3 times: ['xelatex', 'notebook.tex', '-quiet']
[NbConvertApp] Running bibtex 1 time: ['bibtex', 'notebook']
[NbConvertApp] WARNING | b had problems, most likely because there were no
citations
[NbConvertApp] PDF successfully created
[NbConvertApp] Writing 26415 bytes to
C:\Users\ASUS\Downloads\FilterPandasDataframeWithMultipleConditions.pdf
```

```
[ ]:
```